Message

From: Wayne Miller [Miller.Wayne@azdeq.gov]
Sent: 9/20/2016 7:01:55 PM
To: d'Almeida, Carolyn K. [dAlmeida.Carolyn@epa.gov]
Subject: 2016-9-20 - WAFB -Thanks - ST012 EBR wells - Agency site containment and characterization info requests - EPA bottom line version - see sept 15 BCT

Thank you for putting this together and sending.

From: d'Almeida, Carolyn K. [mailto:dAlmeida.Carolyn@epa.gov]
Sent: Thursday, September 15, 2016 3:18 PM
To: JERRARD, CATHERINE V CIV USAF HAF AFCEC/CIBW <catherine.jerrard@us.af.mil>
Cc: Smallbeck, Donald R. (donald.smallbeck@amecfw.com) <donald.smallbeck@amecfw.com>; (Geoffrey.Watkin@cn-bus.com) <Geoffrey.Watkin@cn-bus.com>; Wayne Miller <Miller.Wayne@azdeq.gov>
Subject: 2016-9-15 - WAFB -ST012 EBR wells - Agency site containment and characterization info requests - EPA bottom line version - see sept 15 BCT - cda EPA

Cathy

As we discussed on the call today, the following are element identified by the EPA – ADEQ technical team for consideration in preparation of the workplan:

Work plan for containment:

- which wells will be used;
- well construction details;
- intended extraction rates;
- hydraulic capture model;
- pumps to be used and contingency for backup replacement pumps;
- consideration of accumulated NAPL recovery in pumped wells;
- treatment system design and configuration;
- field logistics/ personnel; and
- health and safety concerns with heated fluids

Workplan for reconnaissance

1) All of the data relevant to LNAPL characterization presented on a single figure.

2) Borings to characterize the areas of the LSZ and LPZ that received less steam and may still contain LNAPL, and areas beyond perimeter steam injection wells where NAPL migration may have occurred. Note that current data may be incomplete to assess these locations and should not be chosen until all eductor pumps are removed and all existing extraction wells are sampled/monitored.

3) Contingency for step out borings in the event that LNAPL extent is not fully defined.

4) Characterize stratigraphy, and contaminant indicators (PID and dye tests) in boring logs from surface to depth of the bore hole.

5) Workplan should include developing a revised estimate of LNAPL mass remaining, both within and outside of the SEE treatment zones, and full extent of the dissolved phase plume, to inform future remedial decisions. The revised

LNAPL mass estimate should be compared to previous estimates and with regard to the mass of LNAPL recovered during SEE. Consider elevated dissolved benzene concentrations (e.g., >5,000 ppb) as an indicator of local LNAPL.

6) Casings for new wells with LNAPL areas should be stainless steel and high temperature grout should be used as a contingency so that they will not have to be abandoned and re drilled in the event of possible future application of SEE.

7) A plan for communication of data, and obtaining consensus on step-out locations. Please upload field notes and boring logs to SharePoint site as they become available.

8) Additional well locations in areas indicated on the attached figure.

9) A plan for sentinel wells to monitor the dissolved phase plume.

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"Because a waste is a terrible thing to mind..."